

**IENTATION-CUM-TRAINING IN WORK-EXPERIENCE**  
**( FOR ELEMENTARY STAGE )**

**10. 11. 94 – 19. 11. 94**

**STATE COVERED : MANIPUR**

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Orientation-cum-Training of Key  
Resource Persons in Work-Experience in MLL  
( 10.11.94 - 12.11.94 )

VENUE : Imphal

Place of work in the education system was emphasized and over emphasized by various Committees and Commissions since the time of Woods despatch (1854). Education Commission (1964-66) recommended the introduction of Work-Experience as an integral part of general education in order to link education to productivity and thus make education an instrument of social & economic change.

The curriculum for the Ten-Year School - A Frame Work (1976) prepared by NCERT included W.E. as an integral component of school curriculum and the same has been accepted and implemented since then.

The National Policy on Education (1986) laid down the following as a Policy statement.

"Work Experience, viewed as purposive and meaningful manual work, organised as an integral part of the learning process and resulting in either goods or services useful to the community, is considered as essential component at all stages of education, to be provided through well-structured and graded programmes. It would comprise activities in accord with the interests, abilities and needs of students the level of skills and knowledge to be upgraded with all stages of education. This experience would be helpful in their entry into the workforce. Pre-vocational program provided at the lower secondary stage will also facilitate the choice of the vocational courses at the higher secondary stage".

Programme of Action 1992, prepared by Govt. of India states the following on Work Experience.

"At the primary and middle school stages of education Socially Useful Productive Work (SUPW)/work experience (WE) forms an integral part of the curriculum in many States, but the actual implementation, both in coverage and quality, leaves much to be desired. It has been observed in actual practice that WE has degenerated into trivial activities in the school and in many States the time allocation rarely exceeds 10%.

The State Governments/UTs should ensure that WE is actually included as an integral part of the curriculum, that teachers are trained to impart the instruction and that necessary financial provision is made. WE programmes are aimed at developing confidence and sufficient psychomotor skills in students to facilitate their entry into the world of work at a subsequent stage. In schools where WE already forms a part of the curriculum, these courses need to be toned up in keeping with the perceptions laid out in the NPE. At least 12.5% to 20% of the school time should be allocated for a systematic implementation of the programme."

Then again the most important and far reaching recommendation of the NPE has been regarding maintaining a national standard of learning for the products of various parts of this country. It declares that MINIMUM LEVELS OF LEARNING WILL BE LAID DOWN FOR EACH STAGE OF EDUCATION. Therefore, keeping in view that the programme of WE has been diluted to mere trivial activities and the necessity and importance of maintaining a national standard has prompted us to conceive and organise this programme with the following objectives

Objectives :

- 1) Understand the meaning, importance, and need for maintaining a Minimum Level of Learning in V.E.
- 2) List down activities specific to their level from class I to class VII
- 3) Understand the evaluation procedure of W.E. activities
- 4) practice meaningful and purposive activities suitable for this stage of education
- 5) undergo sufficient practice to develop adept skill in paper & card board work, toy making, pot cult, kitchen-gardening, wood work & basic electric & circuit .
- 6) plan their lesson in Work Experience.

An activity oriented programme like this leading to some workable skills needs adequate infrastructural facilities like work benches, tools, implements, instruments and raw materials. It is difficult to get these facilities at a distant point. But sincerity of effort on the part of all of us can only make this programme a success. Therefore I request all of us to extend your full co-operation to make this endeavour a success.

10.11.94 :

DAY-TODAY ACTIVITIES

The inaugural session started at 10.30 a.m with Dr. R.K. Nigam Singh, Director, SCERT as Chief Guest. After an initial introduction by the Programme Coordinator, Sri Labanga Singh, Dy. Director, IED, SCERT, Inphal welcomed every body on behalf of the NCERT to this ten-day Orientation-cum-Training of Key Resource Persons in

Work-Experience in MLL. The Programme Coordinator then explained the background and need for such a programme in view of the importance attached to maintaining a minimum level of learning as per the NPE (1986) and remarks of POA (1992) on this curricular Area that it should not be confined to mere trivial activities. He explained the objectives of the programme and sought co-operation from the participants and SCErT to achieve these objectives in view of the limitations of outside agency in getting a suitable infrastructure at a distant place.

The Director, SCErT, Imphal in his inaugural speech thanked the team from RCE, Shubaneswar while stating, that it was for the first time that any team from outside had come for such a programme. He expressed his keenness to push this curricular area through and stressed the need and importance of this area to bring in a social change. His willingness to start the Vocational Courses at the 12<sup>th</sup> stage was indicated in his address.

The inaugural session ended with a vote of thanks by Sri S.C. Das, Resource Person. Among other, the session was attended by the Principal, DIET, Imphal who was kind enough to spare the venue and other rooms for conducting practical classes.

The session began with a lecture-cum-discussion initiated by Sri P.N. Mohanty, Programme Coordinator who explained the need, meaning & scope of Work-Experience as stated in different reports of Education Commission and National Policy on Education (1986). Quoting from POA (1992) he said that "L.E. had degenerated into mere trivial activities and often confined to reading of text books in the class rooms. He stressed the need to maintain



a minimum level of learning and the importance of quantifying a minimum so that the achievement is at par with other regions of the country.

There was discussion on the details of day to day activities and necessary allocation of timing was accepted. In view of shortage of time for practical work it was decided to devote the afternoon session of the day for practical work also.

The participants were divided into 4 groups and were sent to the following areas to be rotated after every two days.

The schedule of practical work is as follows.

<u>Date</u>	<u>Art and Paper work</u>	<u>Agriculture</u>	<u>Model Work</u>	<u>Library</u>
10.11.94	Gr A	Gr B	Gr C	Gr D
11.11.94	Gr A	Gr B	Gr C	Gr D
12.11.94	Gr D	Gr A	Gr B	Gr C
14.11.94	Gr D	Gr A	Gr B	Gr C
16.11.94	Gr C	Gr D	Gr A	Gr B
18.11.94	Gr C	Gr D	Gr A	Gr B
17.11.94	Gr B	Gr C	Gr D	Gr A
19.11.94	Gr B	Gr C	Gr D	Gr A
<u>11.11.94:-</u>				

The morning session began at 9 A.M with a discussion on objectives of N.E. derived from the policy statement of N.E. The objectives as spelt out and detailed under knowledge, skill and attitude and values were discussed. The document "National Curriculum for Elementary and Secondary Education - 1988" A Frame Work, was discussed to find out what it said on Work Experience.

The participants resumed their practical work at 10 a.m..

Mr A - Ink stamp, preparation of greeting card by  
Marb-1 Printing, Card board tray.

Mr B - Preparation of pots & planting of seedlings

Mr C - Making Name plates, Clip board

Mr D - Project on Effects of electricity (low program  
for want of electricity)

12.11.94:

The morning session started with a discussion  
selection of W.E. activities from six areas of basic  
needs like Health and Hygiene, food, shelter, clothing,  
cultural & recreational activities, community work and  
social service, keeping these purposive and meaningful.  
The three phases of teaching learning like exploration,  
experimentation and work practice were elaborately  
discussed. The need to maintain a Minimum Level of  
learning ultimately leading to reach National standard  
was stressed by the programme coordinator.

Supervisory activities as laid down in the NCE of  
document "Literally Useful Productive Work" were readout  
and the participants were assigned to list out activities  
for their own school from class I to class VIII.

All participants had their practical classes after  
11 a.m. At 2 P.m. Sri N. Mangolam Singh, participant from  
DAEP, Bapat assisted by Sri K. Iswar Kumar Singh and  
Mr. M. D. De gave a lively demonstration, with the  
participation of some participants, on preparation of  
apple squash. 4 bottles were prepared, sealed and  
kept for demonstration purposes.

At 3 P.m. the participants resumed their practical  
classes.

13.11.94 :

The participants were sent to visit the flower exhibition in the morning hours and invite the intern to prepare a list of work experience activities which the schools can pursue on a compulsory basis.

14.11.94 .

Morning Session - The P.C. initiated the discussion on time allocation and fund allocation for V.E. projects in primary & U.E. classes. The recommendation of 10 minutes per hour was agreed to. The following recommendation was made.

Primary - Rs.5/-/student/year, recurring

Rs.1000/- year - Non recurring

U.E. Rs.10/- year, Rs.3000/-

A lively demonstration followed on peking of Door Mat by Mr. Jairamda Devi, participant from DIET, Kokching, Manipal, Manipur.

The participants then resumed their practical classes in their respective areas.

15.11.94 .

The session began at 9 a.m with a discussion on the components of a lesson plan. The P.C. explained the methodology of dealing with a theoretical and practical lesson with reference to the demonstration of preparing squash from pine apple and the steps involved i.e. planning the execution of the actual demonstration. A prepared sample Brain-Learning Unit on the need area of Shelter was discussed. The different components including details on 'how to write down objectives' was explained. At 10.30 a.m the participants joined their practical classes.

Activity 1 : There was a lively demonstration on preparation of the following items by Sri L.Tomba, Instructor  
MLL, MLL.

1. Paper fish
2. Fish in plastic tape
3. Flower in Crêpe paper
4. Fish in Crêpe Paper.

17.11.94 :

The morning session started with a discussion on Evaluation in Work Experience. The various components of modern assessment like 1) Knowledge & understanding 2) Personal & Social qualities 3) Process and product 4) Regularity and punctuality 5) work diary were detailed out.

There was also a discussion on Minimum Levels of Learning with specific reference to Work Experience. It was decided to develop a National System of Education with fixing of norms of MLL/MLO and the compulsions of maintaining a regularity of attainment and standards of education will be stressed.

17.11.94 :

The participants finalised the list of activities under MLL for comparison with participation of all participants. The list is as follows, (Appendix-1).

18.11.94 :

The session started with a discussion on Tasks of the Inexperienced teacher. Demonstration of Doll making by Sri L.Tomba, MLL, MLO by Learngbi Devi, participant from MLL, MLO, MLL. The participants were sent to their practical classes for project work.

12.11.94 .

The participants were asked to fill up the questionnaire from 9 a.m. to 10 a.m. at 10 a.m. they participated in arranging an exhibition of the products made by them and the same was inaugurated by Dr. R.K.N. Singh, Director, Education and Director, SCERT, Imphal. This was visited by students, educationists and others in large numbers.

At 12.30 P.M. the validictory function was held, with Dr. Singh as the Chief Guest. The programme Coordinator gave details of activities, projects made, discussions and demonstrations conducted. The participants namely 1) T. Laksh Das 2) K. Iswar Kumar Singh 3) L. Tomba Singh during their remarks on the programme wanted that the duration should have been more and the training should have been intensive. They stressed their demand for such programmes every year in different schools. There was a suggestion for more low cost projects.

Certificates were distributed to the participants by the Chief Guest. In his validictory address the Director Dr. Singh praised the works of the participants in a short span of time and appreciated the efforts of the team from R.C.E., Dhubaneswar. He advised the participating teachers to be in touch with the latest developments in the field of education. He advised the teachers to follow example of B.H.U. where many things could be done through donations from the public. He stressed upon the problems faced by the state with reference to the contemporary education scenerio.

The validictory function ended with a vote of thanks.

## INTRODUCTION

Work Experience is now being considered inseparable from the educational process as a whole if education is to respond to the needs of modern time. It is necessary to build two-way bridges between education and productivity at all levels. General education may no longer be considered complete without at least an introduction to work experience. Work-Experience should form a part of general education right from the primary stage.

### 1.1 HISTORICAL BACKGROUND

The Education Commission (1964-66) emphasised the role of education as a powerful instrument of social and economic and political change. The Commission concluded that one of the means of achieving the national goal was by linking education to productivity, and this link should be forged by introducing work experience as an integral part of general education. Work experience aimed at giving the future citizens a keen sense of personal worth, dignity and efficiency and strengthening in them the desire for self-improvement and social service.

The Curriculum for the Ten-Year School - A Framework (1976) of the NCERT included work experience as an integral component of school curriculum as visualised by the Kothari Commission.

The Review Committee on the Curriculum for the Ten-Year School (1977), which reviewed the above document recommended Socially Useful Productive Work (SUPW) as

a distinct curricular area to provide children with opportunities of participating in social and economic activities inside and outside the classroom thereby enabling them to understand scientific principles and processes involved in different types of work. The Committee recommended three phases in the teaching-learning process of SUPW viz: study of world of work through observation and enquiry; experimentation with material, tools and techniques; and work practice. The productive manual work situations were to be drawn from the areas of health and hygiene, food, shelter, clothing, culture and recreation and community work and social service.

#### 1.2 NEW POLICY ON EDUCATION ON WORK EXPERIENCE

The National Policy on Education (1986) reiterated the concept of Socially Useful Productive Work and re-named it as Work Experience. In this context it laid down the following as policy statement:

"Work Experience, viewed as purposive and meaningful manual work, organised as an integral part of the learning process and resulting in either goods or services useful to the community, is considered as essential component at all stages of education, to be provided through well-structured and graded programmes. It would comprise activities in accord with the interests, abilities and needs of students, the level of skills and knowledge to be upgraded with the stages of education. This experience would be helpful on their entry into the workforce. Pre-vocational programmes provided at the lower secondary stage will also facilitate the choice of the vocational courses at the higher secondary stage."

The above statement provides:

- a definition, which under scores the significance of work in the learning process, the need for product or service emerging out of the work performed, the universality of work in the school system and beyond, and the need for well structured and graded programmes.
- a clue to the nature of work activities so as to conform to interest, abilities and needs of the learning.
- the case of increasing the skill level to match the stage of education<sup>is</sup>.
- the purpose of such WE<sup>is</sup> to help in (i) smoother transition to the world of work, and (ii) pre-disposition to the selection of a particular vocation for a majority of students.

One of the distinctive features of the Work Experience Programme as visualised in the National Policy is the provision of pre-vocational programmes at the lower secondary stage.

### 1.3 PROGRAMME OF ACTION ON NPE

Programme of Action on National Policy on Education (1986) highlights the following points:

- (a) At the primary stage of education, Work-Experience forms an integral part of the curriculum in many States. In spite of its good intention of developing proper attitudes, the actual implementation both in coverage and quality leaves much to be desired.
- (b) At the middle school stage, work experience programmes aim at developing confidence and sufficient psychomotor skills in the students to enter the world of work directly or through certain occupational training.



- (c) The work experience programmes for the secondary stage are viewed as a linear expansion of that of the middle stage. These activities at secondary stage are also expected to enable the students to opt for vocational programmes at the +2 level with better appreciation and understanding. It may also be mentioned that a significant number of students drop-out after this stage. Hence, programmes of work experience are expected to ensure the modest preparation of students before they leave the school, to enable them to choose the occupation. Such pre-vocational courses are to be handled by teachers with specific skills and competence. These programmes also need proper resources within the school.

#### 1.4 OBJECTIVES OF WORK EXPERIENCE

##### 1.4.1 General objectives

The general objectives of the Work Experience (WE) programme are as follows:

Knowledge and Understanding  
to help the child:

- identify his needs and those of his family and community in respect of food, health and hygiene, clothing, shelter, recreation and social service.
- acquaint himself with productive activities in the community;
- understand facts and scientific principles involved in various forms of work;
- know the sources of raw materials and to understand the use of tools and equipment in the production of goods and services;
- understand the utility of productive work and services to the community;

- understand the needs of a technologically advancing society in terms of productive processes and skills;
- understand the processes of planning and organisation of productive work;
- conceptualise his role in productive situations;
- develop an awareness of social problems;
- develop his abilities for self evaluation of performance.

### Skills

To help the child :

- develop skills for the selection, procurement, arrangement and use of tools and materials for different forms of productive work;
- develop his skills to observe, manipulate and participate in work practice;
- develop skills for the application of problem solving methods in productive work and social service situations
- develop his skills for greater productive efficiency;
- enhance his working competence sufficiently so as to enable him to earn while he learns;
- use his creative faculties for devising innovative methods and materials.

### Attitudes and Values:

To help the child :

- develop respect for manual work and regard for manual workers;
- inculcate socially desirable values such as self-reliance, helpfulness, cooperativeness, team-work, perseverance, tolerance, etc.;
- develop proper work ethics such as regularity

- punctuality, honesty, dedication, discipline, etc.,
- develop self-esteem through achievements in productive work and service;
- develop a deeper concern for the environment and a sense of belonging, responsibility and commitment for the society.

#### 1.4.2 STAGE-WISE OBJECTIVES

##### Primary Stage (Class I - V)

At this stage of education, the objectives of education come very close to those of education in general. The young children enjoy participation in a large number of activities at school, at home and in the community rather than being engaged in bookish education alone. Therefore emphasis should be laid on the development of desirable health, environmental sanitation and beautification practices through the WE activities.

One of the aims of education at this stage should be to develop awareness in the child about the world of work through visits to service situations or through participation in productive work.

The development of desirable attitudes, values and habits of work, such as appreciation of manual work and regard for manual workers, cooperativeness and team-work, regularity, punctuality, discipline, honesty, creativity, persistence, etc. can be achieved through well organised self-expressive service and production-oriented activities.

##### Upper Primary Stage (Classes VI - VIII)

At this stage, children are sufficiently mature to carry out strenuous work with higher skills which may require closer coordination of hand and brain. They should be encouraged to participate more intensively in production processes by undertaking well-designed

projects in selected area of human need which will mark the beginning of pre-vocational orientation to the JE programme.

The children should also be able to relate their knowledge of facts and scientific principles involved in various types of work. They should learn to apply problem-solving methods and be able to identify and use the tools and raw materials and equipment in a scientific manner.

Observation, manipulation and work practice should be the methodology to achieve the stipulated goals. The process of inculcation of positive attitudes and values should be continued. Besides, the children should develop a deeper concern for the environment and a sense of belonging, responsibility and commitment for the community.

#### High school stage (Classes IX-X)

This stage may be regarded as a linear extension of the upper primary stage in respect of aims and goals. However, work practice should assume a much greater importance. Through the JE Programme children should be able to contribute meaningfully to environmental improvement and conservation, reduction of pollution, and development of proper nutrition, health and hygiene in the community.

At this stage, pre-vocational orientation should be clearly perceptible as far as the curricular design is concerned, the development of vocational aptitudes or interests should be given sufficient importance. These pre-vocational programmes will facilitate the choice of

vocational courses at the higher secondary stage. Even for those who opt for academic stream at the +2 stage, provision of enhanced participation in work would add a much desired dimension to academic education and produce better-educated young people in general, which the academic courses alone would fail to achieve.

### IMPLEMENTATION OF WORK EXPERIENCE

In the field of education in India today, the most controversial, much talked about and widely discussed subject is perhaps implementation of work experience at different stages of school education. There are six stages of implementation viz. planning, selection, organisation, execution, evaluation and reorganisation. Each and every stage is to be implemented seriously and very carefully. The programme of Work-Experience as detailed out in "The Curriculum for the Ten-Year School - a framework" published by the NCERT (1976) on the basis of the recommendations of the Kothari Commission has been implemented in various states with varying degree of success at different stages in different parts of the country. It has been implemented throughout the country under different nomenclature such as Socially Useful Productive Work (SUPW), Craft, Work Education, Life Oriented Education etc. By and large the programme has left a great deal to be desired in terms of its proper implementation in schools in spite of the policy support provided to it since Basic Education the strength of pedagogical foundations on which it stands. There is, therefore, a need to provide a definite structure to WE as applicable at different stages of education so that it leaves less scope for varied conceptual interpretations and the programme renders itself more implementable than at present.

## .1 DECENTRALIZED CURRICULUM PLANNING

Planning for the WE programme should be a decentralized process. At the national level, only a suggestive syllabus frame for pre-vocational courses has been prepared to ensure relevance to the needs, resources and conditions, which should be followed by the development of a model syllabus by the state. The model syllabus developed by the state should be elaborated into detailed syllabus at the district and local levels. District, taluka and village-level committees should be set up for this purpose by including representatives from various government departments, development agencies and the public. These committees should work out, locate specific plans and programmes based on local occupations, needs and resources which should be supplied to the schools well in advance.

They should also consider the feasibility of the provision of supply of raw-materials and the sale of finished products.

The syllabus outline, prepared by the NCERT, has kept in view the needs of rural, urban, hill and coastal areas. However, the outline is not exhaustive, and activities or projects found relevant to a state or local needs, should certainly be added.

### SELECTION OF ACTIVITIES

The WE programme centres around six areas of human needs namely, food, health and hygiene, clothing, shelter, culture and recreation and social service. Balanced selection of activities in each of these areas may be made according to the educational potential of each activity and the facilities (Materials, tools, space, teacher expertise, etc.) and time available for it.

A variety of activities should be provided as far as possible so that children can develop self-sufficiency in meeting their needs and discover their vocational courses, local trades and occupations should be given prominence. Besides, a balanced distribution of activities over the three dimensions of WE i.e. Life Skills, Production and Community Service should be achieved in accordance with their importance at different stages of education.

Although the activities will differ from school to school, depending upon its needs and resources, there can be a programme of Essential Activities which should be undertaken by most of the schools. The programme of Essential Activities should include regular and universal participation of children throughout the year. The other programme of Productive Work and Services under Work Practice at the primary stage, and Elective Programme at the upper primary and high school stages, should result into the production of goods or services which are saleable or consumable at home, in the school or outside, which will also provide motivation to students and their parents.

The purpose of Essential Activities is to bring about attitudinal changes and to develop readiness for continued productive work. The purpose of the Elective Programmes is to give a vocational bias to the WE programme. It may, therefore, require repetition or constant practice according to the time available.

### 3 TEACHING-LEARNING PROCESS

The teaching-learning process in WE has three phases : study of the world of work through observation and inquiry; experimentation with materials, tools and techniques, and work practice. The first two are concerned

with preparations for actual participation in productive work and services, and the third may lead to production.

In primary classes, study of the world of work through environmental studies should be related to the exploration of productive manual work and service situations at home, in schools and in the community through observation and enquiry. The focus will be on the variety of productive work and services around, workers engaged in them and the materials and tools being used. In the upper primary classes, the exploration of work can be more scientific and social aspects of work can be further highlighted. In the high school classes, children will be expected to conduct work-study more systematically and to submit at least two reports.

Experimentation with materials, tools and techniques at the primary stage should be restricted to those that are plastic and pliable in nature. The end product may be creative, self-expressional work or some usable things. Services should be such that children enjoy participating in them. The work undertaken should satisfy their needs and interests. They should be led to arrive at the solution of these problems by discussing the materials, tools and techniques for performing work and services, and by undertaking appropriate work.

The WE should not be performed mechanically, and must include planning, analysis and detailed preparation at every stage, so that it is educational in character. Improved tools and modern techniques should be adopted in the performance of WE activities so that it leads to the understanding of a progressive society based on technology.



2.4 ALLOCATION OF TIME

It is stipulated that in classes I-VIII at least eight periods a week of 45 minutes duration each, will be allocated for the WE. In Classes IX and X, a minimum of six periods per week should be allocated besides the out-of-school hours for productive work and community service. Wherever possible, more time may be allocated to WE in the school curriculum itself. Block periods may also be arranged, if necessary, for productive work, social service or visits to work-places.

.5 FACILITIES FOR WE

Two types of facilities are required for the implementation of the WE programme, namely (1) Physical facilities consisting of accommodation, land, workshop, tools, equipment, raw materials, and (2) teacher expertise. Some physical facilities as spelt out above will be required for productive work, for which resources of the community may be used. However, experience has shown that all students cannot be engaged regularly and continuously with the help of community resources alone. Besides, the problem of road safety and transport is also there. Hence, schools should gradually develop their own resources, beginning with the provision of minimum facilities, a list of which with specifications should be prepared by the state and circulated among the schools. Provision should also be made for safe custody of materials, tools, equipment and finished goods.

## 2.6 TEACHERS FOR WE

It would be appropriate to utilise community resources for the effective implementation of this programme. Although it is expected that all teachers should work as WE teachers, a large number of activities may require specialized personnel. There should be provision in this programme for the involvement of experts from the community. This will be particularly necessary to provide pre-vocational orientation at the high school stage. The involvement of all teachers in this programme would logically imply their proper orientation and training in this area.

## 2.7 USE OF COMMUNITY RESOURCES

Utilisation of community resources for effective implementation of WE programme is quite necessary. While it may be necessary to allocate minimum resources to schools for introducing pre-vocational courses, especially at the high school stage, advantage may also be taken of the local business enterprises, workshops and work-centres for work-site training.

## 2.8 DEVELOPMENT OF INSTRUCTIONAL MATERIAL

The nature of WE, which is concerned with 'doing learning', is different from that of other subjects which are by and large academic in nature. Therefore, the traditional type of textbooks meant for the subject areas or teaching of crafts will not be helpful to this area. The problem-solving approach and the integration of knowledge relating to different subject areas with WE demand a new type of literature for the guidance of teacher. Instructional materials in the form of curriculum guides, handbooks, source-books, resource-units and doing-learning units will play a

very vital role in the implementation of the programme of WE. Teachers' hand-books and source-books on the WE activities/projects will especially be necessary in the immediate present, along with the specimens of detailed materials such as doing-learning units.

### EVALUATION OF WE

Entire evaluation in the area of WE should be a continuous process from Grade I to the end of Grade XII. The evaluation should be internally conducted by the teacher/teachers of the subject and should be shown on the performance record of the student. It should take care of theory and practice in an integrated manner but more weightage should be given to the evaluation of actual practical work.

Even at the end of High School Stage of education external evaluation may not be the right approach. However if the programme is likely to suffer in the absence of such an external evaluation, the practice of examining the students by external examiners particularly drawn from the cluster of schools of which a particular school is a member, may provide a better alternative than a conventional type of external evaluation as practised in several other areas. The evaluation in WE should find the same place of honour and significance as other academic subjects. Phased implementation of modern evaluation mechanism will also apply to WE.

It is expected that in the evaluation of students' performance, while paramount importance will be given to attitudinal development at the primary stage, skill development will receive maximum weightage

at the high school stage. This will have to be reflected in the weightage assigned to the dimensions in terms of time and marks. It should be remembered that WE is predominantly a 'doing' subject and, therefore, actual work performance should receive maximum attention here.

Teachers should keep systematic records of pupils' progress in WE. Apart from the teachers' record, each student may be asked to maintain his own record card. Students should make necessary entries in the card with the help of the teacher after completion of every unit of activity.

For internal assessment, a well-designed plan of continuous, comprehensive evaluation, using worthwhile evaluative criteria should be prepared. Assessment may be made and recorded after every operational stage of activity/project or its completion.

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JOB BASED PRACTICALS IN  
ART EDUCATION  
WOOD WORK  
AND  
ELECTRICITY



Objective of Art Education:

- a) To enable the child to express himself creatively with the help of drawing, painting, modelling, music, dance and drama etc.
- b) To stimulate physical, emotional intellect, perceptual, aesthetic, social and creative growth.

The goal of art education is to provide the child with opportunity to express his creative ideas and grow into refined man. It also develops the aesthetic attitude which permeates all activities and not only the learning of the skills of arts. The education begins with creative aesthetic activities. Through art education, the aesthetic sense should reflect in work experiences and curricular activities in school and home.

Art classes should provide complete freedom to the child to express his talents on art so that he becomes interested and chooses one or two items of art activities for self expression. Art education should be a teaching subject.

Art should not be considered as the last resort of the slow learners and drop-outs but an integral part of education for all. The principle of 'Learning by doing' which forms the basis of the liberal methods of teaching art, implies also, self discovery through self expression for child. Art therefore is a training in seeing, sensing, feeling and finally doing.

Art Education

Sri B.K.Dutta,  
RCE, Bhubaneswar.

Activities undertaken during the Workshop 'Work Experience' held at IMPHAL from 10.11.94 to 19.11.1994.

Job No.1 POSTAL ENVELOPE

Procedure:

1. Take a paper sheet ABCD of size 28 cm x 22
2. Mark the middle points on AB, BC, CD and DA. Mark them EFGH and join EF, FG, GH and HE.
3. Take the middle points of EF, EH, FG and GH. Mark them as PQRS.
4. Make triangular portions at PQRS.
5. Remove AFE, EBH, HCE and EDF and also remove the triangular portion of PQRS.
6. Mark dotted line to SP, SR, PQ and QR and fold along the dotted lines accordingly.
7. Apply gum to the edges FSR, HPQ and ESP to a width of 1 cm and press gently.
8. Leave the gum on GRQ to dry. The envelope is now ready for use.

Job No.2 OFFICIAL ENVELOPE

Procedure:

1. Take a paper sheet ABCD of size 28 cm x 21 cm.
2. Draw a line EF parallel to AB at a distance of 5 cm. Repeat the GH parallel to CD at a distance of 6 cm. Then draw a line vertically KL at a distance of 3 cm.
3. Remove KBOMK and ONLCO. Mark R at a distance of 1 cm from K and join to M. Repeat the same and mark it as 1 from L.



4. Remove KRHI and LNQ. Take 1.5 cm from A and I and mark as ST, join ST. Mark the biggest point XY. Again, take 1 cm from S and T and mark as UV and join UV.
5. Remove UAEX and GYVD
6. Fold EM, GN, XY.
7. Apply gum along the edges VU, AR and EG and paste it. Office envelop is ready now for use.

### Job No.3 TABLE TRAY

#### Procedure:

1. Take a cardboard ABCD of size 30 cm x 24 cm.
2. Draw line parallel to AB at a distance of 5 cm. Similarly at a same distance draw line EF, GH, IJ and KL.
3. Take 2.5 cm between AI, AE, KB, BF, HD, DL, JC and CG. Mark them as M, N, O, P, Q, R, S, T.
4. Join MU-NU, OV-PV, QX-RX and SW-TV.
5. Remove MU-NV, OV-PV, QX-RX and STW.
6. Put a scale on UV and fold it. Similarly VX, WX and WU.
7. With the help of adhesive tape join the corners.
8. The table tray is ready now for use.

### Job No.4 PEN AND PENCIL HOLDER

#### Procedure:

1. Take a rectangular card sheet of size 20 cm x 10 cm. ABCD
2. Draw a straight line EF parallel to DC at a distance of 1 cm.
3. Cut with a pair of scissors in a same distance over the line EF and DC as shown in step, 1.
4. Make a cylinder so that BF will overlap AE by a width of  $1/2$  cm and paste them together.
5. Prepare a base with a thick cardboard of 10cm x 10cm.
6. Put gum on the cutting pieces of the cylinder and fix on the base board. The pen and pencil stand is ready now for use.

### Job No.5: MARBEL PRINTS

#### Procedure:

1. Choose 2 to 4 oil colour tubes or enamel paints.
2. Individual plates and thick round brushes (No. 1) are required for individual colours.
3. Take small quantity of different colours in oil plates and dilute the colours with kerosene oil or turpentine oil. For diluting the colour, individual brushes will be required. The colour should be as thin as possible.
4. Take a metal tray or plastic tray and fill it with plain water.
5. Spray the colours one by one by the brushes (without dipping) on the water. The colour will float on the top of the tray.
6. Take paper (drawing sheet or plain paper) size 36 cm x 24 cm or 28 cm x 18 cm and fold equally.
7. Put the paper on the water where colours have been sprayed so that the paper surface comes in contact with water. Keep the paper for a few seconds and remove it from the water. A good colour prints will be formed on the surface of the paper.

This is marbel print and can be used to prepare greeting cards.

### Job No.6 .SPATTER PRINT

#### Procedure:

1. Take any one poster colour and mix it with water.
2. Take a piece of twin thread of 18" long.
3. Take a piece of drawing sheet of 36 cm x 24 cm and fold it equally.
4. Dip the thread into the colour.
5. Remove the excess colour gently from the thread with two fingers of left hand.
6. Unfold the drawing sheet and keep the thread on both the sides of the drawing sheet. Remember one end of this thread will be out of the sheet.
7. Close the folded sheet and gently press with the left hand palm and slowly pull the thread till it comes out.
8. Unfold the drawing sheet and a good spatter print will be found.

ORGANISATION OF EXHIBITION

Job No.7

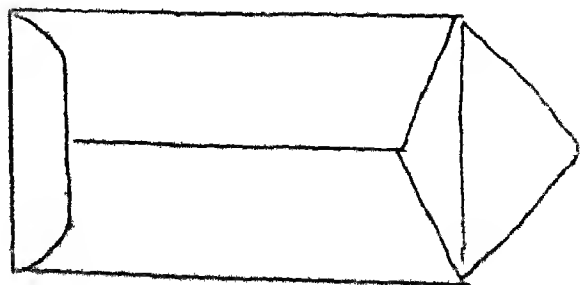
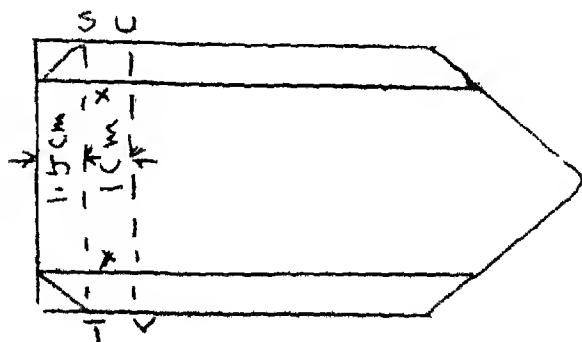
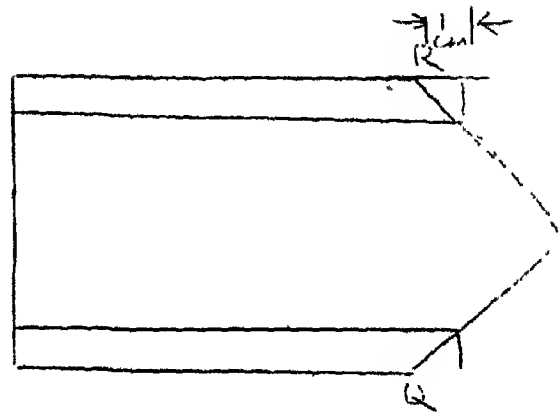
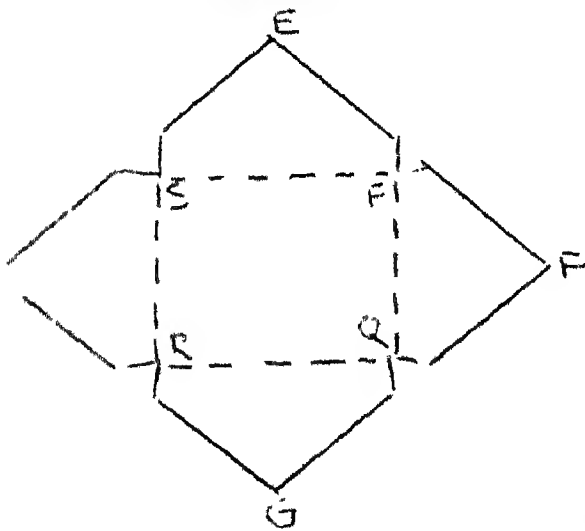
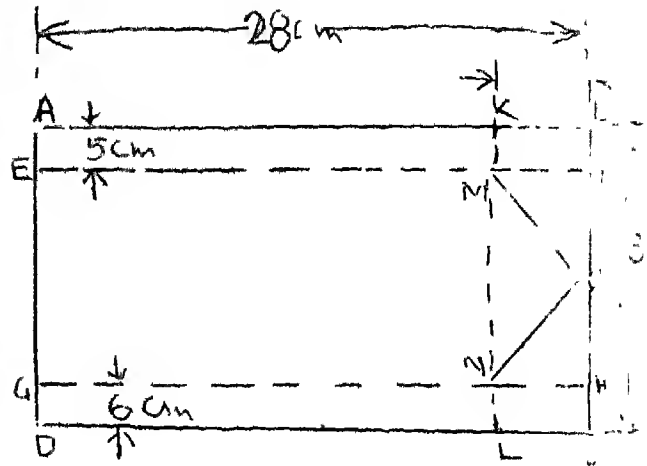
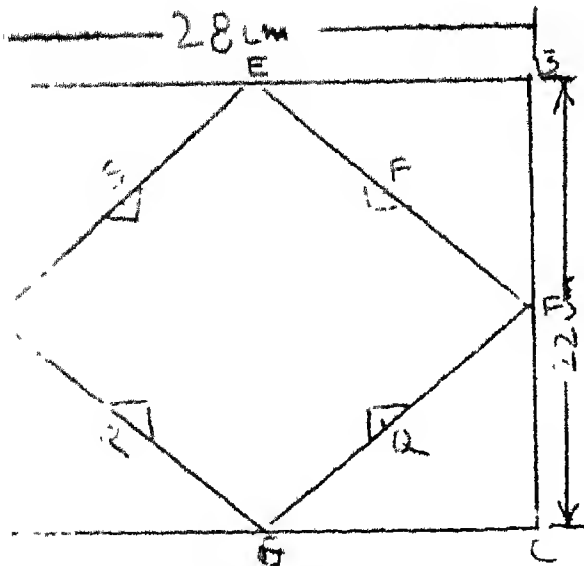
On the last day of the workshop, an exhibition was organised by the participants under the guidance of Sri B.K. Dutta, B.C. Brahma, D. Moharana and Srihar Das. The product materials from Art work, Electric Work, Wood Work and Agricultural Work had been arranged systematically and so neatly so that the participants will be able to incorporate the ideas among their students to develop their aesthetic sense.

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30:

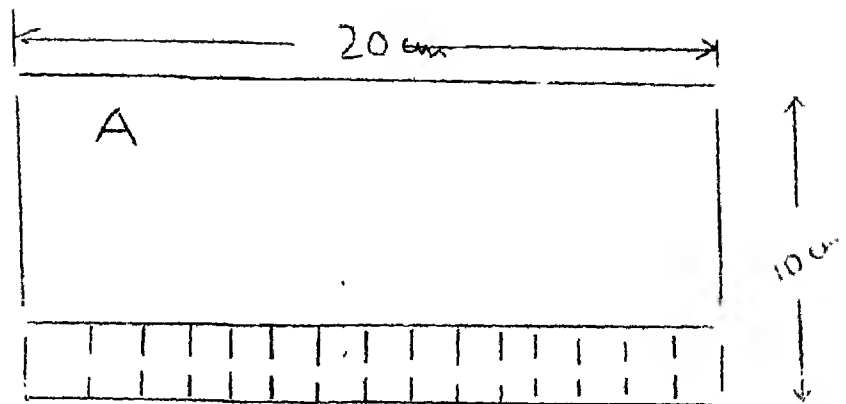
POSTAL ENVELOPE

OFFICE ENVELOPE

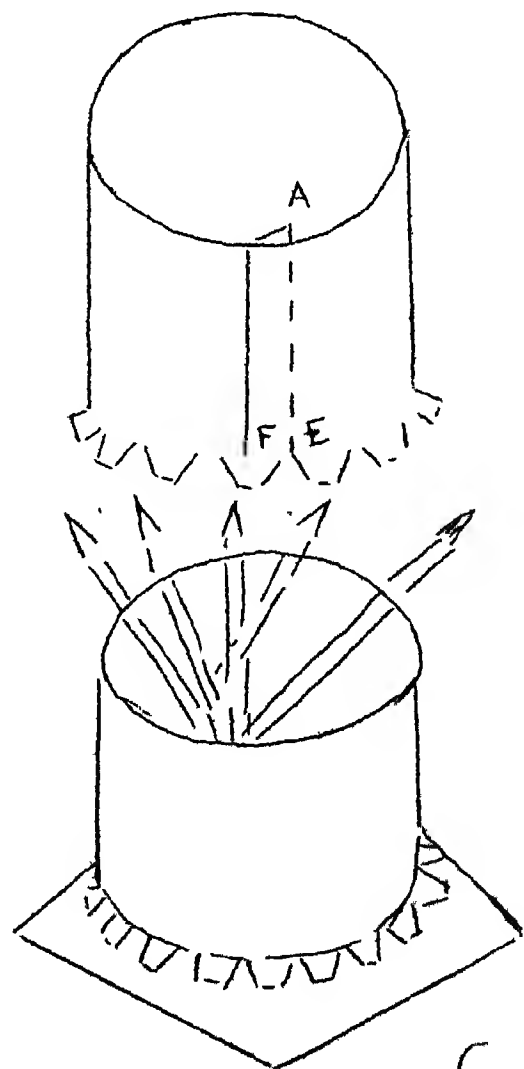
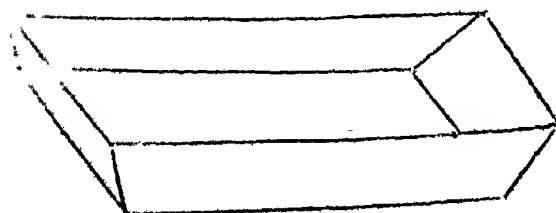
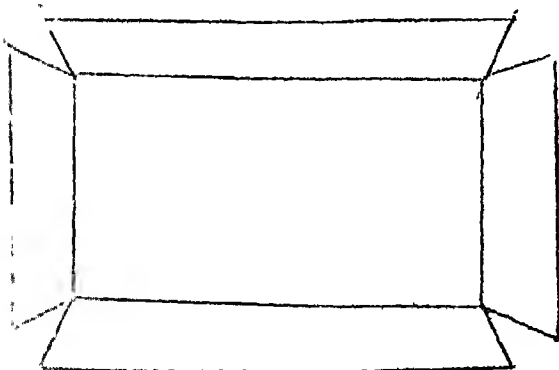
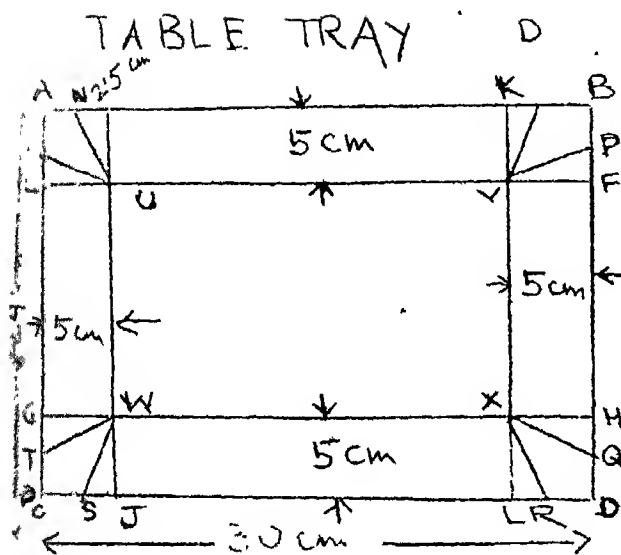


: 31 :

# Pen/Pencil Holder



## TABLE TRAY



*Amr*

Growing Plants in Pots

Sri Srihari Das  
R.C.E., Bhubaneswar.

Activity for classes V/VI

Growing of plants in pots is one of the effective means of beautifying a garden. Pot plants are easily handled and removal conveniently to desired places in the garden for the purpose of decoration. In times of water scarcity a good number of plants can be grown in pots than in the ground. Though potting is an interesting operation, it requires a certain degree of skill and practice to do it in the right way.

Pots are made of burnt porous clay in various sizes, to provide the required amount of soil and root space to different kinds and sizes of plants. Usually, the vertical height of the pot is the same as the internal diameter at the top. Pot sizes vary from 2 inches to 18 inches. Small pots up to six inches should have a hole at the bottom, larger pots should have one or two more holes according to size. Normally 6 inch pots are the most favoured for growing well rooted cuttings of several kind of plants and small plants of all kinds. Pots of special sizes and shapes are used for special purposes.

The first essential of good potting is the provision for efficient drainage. The water supplied to the plant should pass out of the pot after wetting the soil through. It should not be allowed to stagnate in the pot around about the roots. For this purpose cracks (i.e. pieces of broken pot or stones) are put against the drain hole. Then the cracks are covered with a layer or of course sand or coconut fibre to prevent

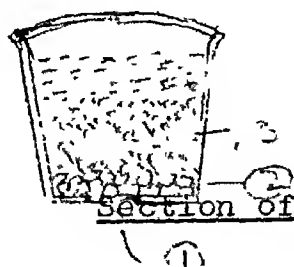
fine soil from getting washed down into the drainage material and clogging it, so that 1/4th depth of the pot will be filled up by crocks and sand.

After the pot is thus filled with crocks and sand, well rotten compost is put to fill the entire pot leaving 1 - 1 1/2 inch space at the top. Fine sand is sprinkled on the soil.

The plant that is to be put on pot, is held in the centre and its roots are carefully distributed round the centre, fine sand is again sprinkled on the roots covering them, then compost is put all round. Press the soil a little near the root area. Now the potting is over and the level of the soil is up to the first pair of true leaves.

#### Soil for the pot plants:

The soil for pot plants, called the 'compost' consists of a mixture of earth, manure and other materials which are evenly distributed in it. It is made by mixing 3 buckets of cowdung manure, 1 basket of earth, 1 1/2 basket of sand and 1 basket of lead mould.



- 1) - Drain hole
- 2) - Crocks
- 3) - Sand
- 4) - Compost

The entire activity can be done step-wise which are as follows;

Step - I Selection of Pot

Size of pots varies from 2 inches to 18 inches. So according to the size and nature of plant, one pot may be selected e.g. for croton plant 9 inch pots are commonly used.

Step - II Cleaning the Pot

Keep the new pot in water so that it soaks some amount of water, otherwise it absorbs too much of moisture from the soil preventing the newly potted plant from making any progress. Then clean it which removes remnants of past diseases, fungal spots etc.

Step-III Proper provision for drainage

For proper aeration and good drainage each pot must have atleast one drain hole at the bottom. It is to be checked first. If it is not there then one drainhole is to be made. Then a large crock is to be placed against the drain hole and some more pieces of crocks are to be placed above these overlapping each other. These are then covered over with a layer of broken pieces of the size of a pea.

Step - IV Preparation of soil for Pot:

Prepare right type of soil for filling the pot. Take 3 basket of well rotten cowdung manure and 1 basket of earth + 1 1/2 basket of sand + 1 basket of leaf mould and mix them thoroughly.



Step - V Fill up the pot with sand

After the pot is filled with crocks these are to be covered with a layer of coarse sand. This layer of crock and sand will be  $\frac{1}{4}$ th of the pot.

Step - VI Fill up the pot with soil

After the pot is filled with crocks and sand, the above prepared soil is put with its centre elevated to a point, to till the entire pot leaving  $1\frac{1}{2}$  inch from the top.

Step - VIII Planting the seedling or cutting

The plant is held in the centre and its roots are carefully distributed round the conicelly shaped soil, fine sand is again sprinkled on the roots, then compost is put all round, gently firming it till  $\frac{1}{2}$  inch of space is left on the top.

: 36:  
Preparing a Table Calendar

Sri D. Moharana  
RCEB.

**Aim:-** To develop knowlddge about mitre cutting.

**Materials required:**

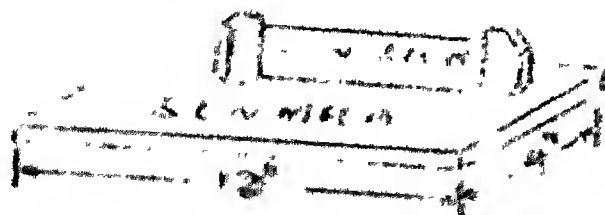
Wooden batton 1" x 3/4" x 2'-8" = One piece  
Hard Board 4" x 10" = Two pieces  
Sunnica 4" x 12" = One piece  
Dendrite = 50 ml  
Sand paper 50° = 1/4 sheet  
Panel Pin 1/2" = 50 nos.  
Paint = 15 ml  
Brash 1/2" = 1 pc.

**Tools required:**

Scale, Pencil, Block Plane, Try Square, Tenon 30°  
Hammer.

**Procedure:**

- a) The wooden battons must be smooth by using Jack Plane and cut it as per measurement in the drawing.
- b) The ends of battons should be cut at 45° angle by using Tenon Saw.
- c) Two pieces of Hard board must be cut and smooth.
- d) The wooden battons must be fixed up with Hard board with panel pins.
- e) The one top of the prepared box should be fixed with sunmica.
- f) Prepare a "U" type frame with batton and sunmica and fix it on the top of the frame to insert calendar pieces.
- g) Edges and ends of the box should be painted with enamel paint.



Preparing a "Pointer"

Sri D. Moharam  
RCE, Dhule, Maharashtra.

Aim: Uses of Jack plane, Block plane and outside caliper.

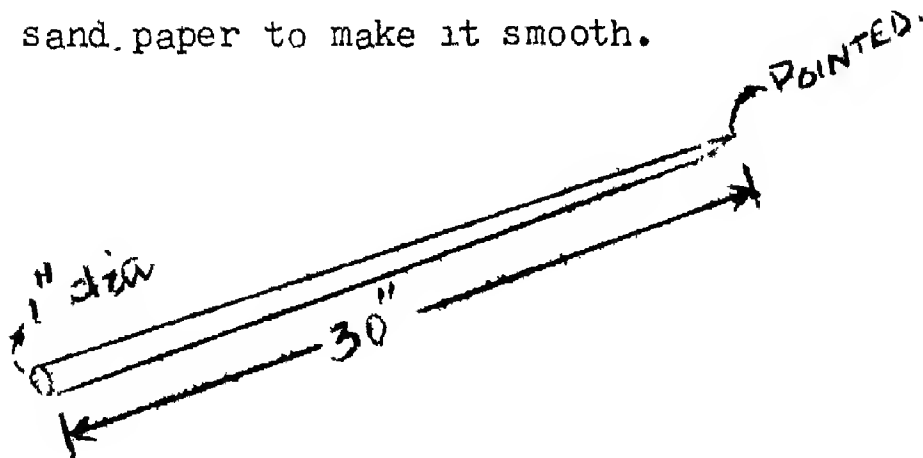
Materials required:- Size wood 2'-6" x 1" x 1" = 1 piece

Tools required :-

Scale, Block plane, Jack plane and  
caliper (outside)

Procedure:-

- Select a better type, straight grained wood.
- Fasten the wood piece in the wood vice, so that the corner will be planed by Jack Plane.
- Remove the Wood piece from vice, hold it in the left hand and make it round by using Block plane.
- One end should be tapered and pointed.
- Use sand paper to make it smooth.



Preparing a Switch Box

Sri D. Moharana  
R.C.E., Bhubaneswar.

Aim:- To develop knowledge about fixing and connecting of switches.

Materials required:

Wooden battons  $30'' \times 3/4'' \times 1'' = 1$  piece

Hard Board  $6'' \times 8'' = 2$  pieces

Sun mica  $6'' \times 8'' = 1$  piece

Panel Pin  $3/4'' = 50$  nos

Wood Screw  $1/2'' = 6$  nos.

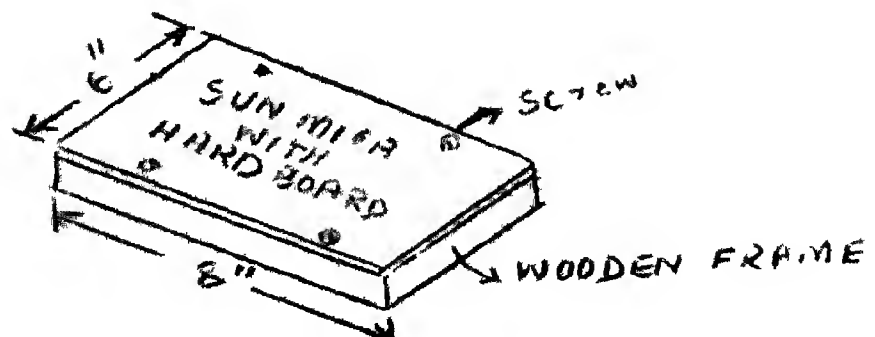
Wire  $3 \times 22 = 1/2$  mtrs.

Tools required:

Scale, Try Square, Pencil, Block Plane,  
Tenon Saw, Hammer, Chisel  $1/2''$ , Hand drill,  
Screw driver, Scriber

Procedure:

- Prepare a box as prepared previously (Table calender)
- Fix-up sunmica as per procedure.
- Mark the switch base line.
- Make two holes on the base
- By using chisel make a rectangular hole on the box.
- Insert the switch and fix it with screws.
- Connect the switch and fix it with screws.
- Connect the switch as per instruction of your teacher.



### Preparing A "Writing Board"

Sri D. Moharana, B.E.

Aim:- To develop knowledge about Hard Board and Laminates and their uses, use of adhesives.

#### Materials required:

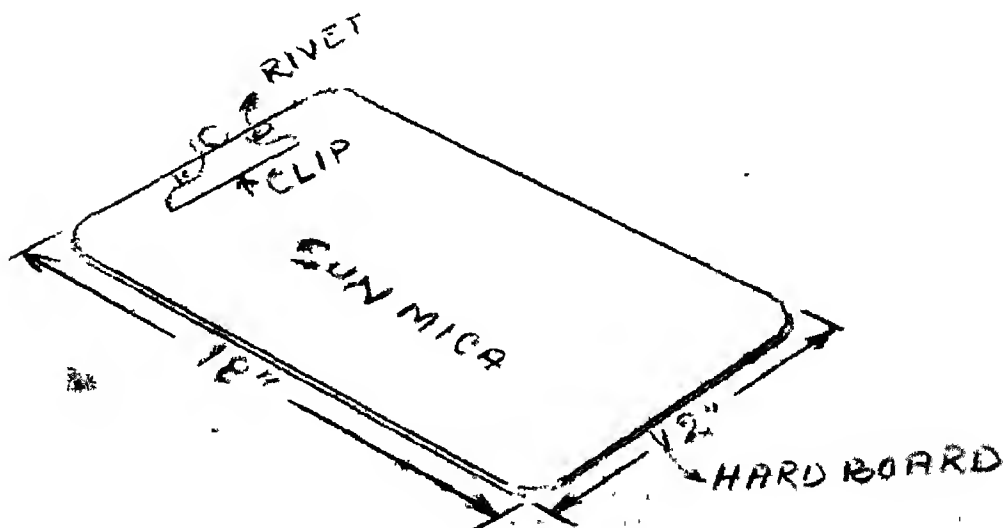
Hard Board 4 mm thick 18" x 12" = One piece  
Laminate Sheet (Sunmica) 18" x 12" = One piece  
Adhesive (Dendrite) = 50 ml.  
Sand paper 50<sup>0</sup> = 1/4 piece  
Metal Clip 4" wide = 1 pc  
with rivet

#### Tools required:

Hand saw, scale, pencil, scriber, rasp file  
Hammer, Hand drill with bit, Block Plane

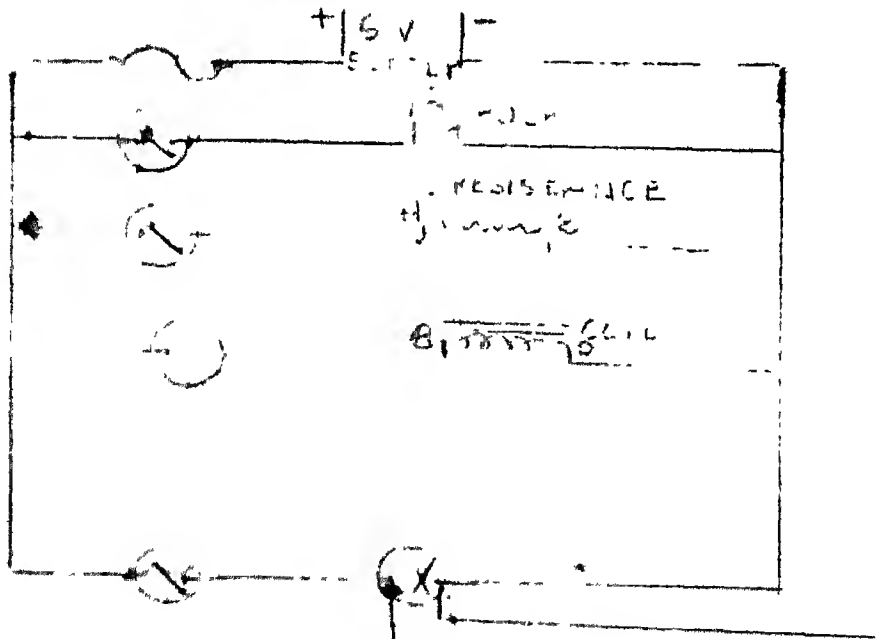
#### Procedure:

- Layout the border lines of writing board on Hard board sheet by using scale & pencil.
- By using Hand saw cut the sheet as per line.
- By using scriber cut the sunmica sheet.
- Use Dendrite on the sunmica and paste with Hard board, Leave it for 10 minutes for drying.
- The edges and ends should be <sup>made</sup> smooth by using Block Plane. Corners must be half rounded by Rasp file.
- Make two holes on the board and fix the clip with rivet by using Hammer.



Sri B.C.Brahma  
R.C.E., Bhubaneswar.

1. Class - VI
2. Area - Shelter (Technology and Craft)
3. Sub-area - Circuit connections
4. Title of the Project and Activities :- Common Effects of Electricity
5. Related informations:- Commercial informations about the accessories and about the circuits.
6. Objectives of the Activities:-
  1. Circuit layout
  2. Selection of wires and its striping and Dressing
  3. Identifying the polarities, various accessories and its terminals.
  4. Use of right tools for right job
  5. Proper fixing of Accessories
  6. Wiring/connection of circuit.
7. Circuit Diagram :



## 8. Resources Required:

### A. Materials

<u>Name of items</u>	<u>Specification</u>	<u>Quantity</u>
Board	20" x 14"	1
Lamp with holder	Screw Cap . 6v - .3A	1 set
Enamell wire	30 S.W.G.	50 gms
Binding post(Plug Top)		4 nos
Toggle Switch	1-w, 5 Amp	4 nos.
Cut-out	5 Amp.	1 no.
Hook-up wire	PVC 22 SWG	10 mtrs.
Battery	6v - 1A	1 no.
Two pin socket	5 Amp	1 no.

### B. Tools

Hand drill	1/8" Bit	1 no.
Pliers	Combination	1 no.
Screw Driver	4" and 6"	1 set
Knife	2"	1 no.
Soldering Iron	25 W	1 no.

## 9. Conducting the Activities

Step 1 :- Grouping of students

Step 2 :- Lay-out the Board (20" x 14") and Mark the holes of the Accessories to be fixed.

Step 3 :- Fix the Accessories by screws

Step 4 :- Make the connections of all the accessories using Hook-up wire, and connect the Battery lead to the Board.

Step 5 :- Put the 1 Amp. fuse wire in Cut-out and the S.C. lamp (6v - .3A) on the holder.

Step 6 :- Switch 'ON' the Lamp and it should glow.

Step 7 :- Take a piece of Nichrome wire (30 SWG, and 4" length) and coil it and connect across the terminals marked A and B.

Step 8:- Switch ON this Heater and it should be red hot

Step 9 :- Make a coil of enamelled wire (30 SWG, 50 Turns) on a Hard Board Bobbin of 2" x 1" x 1/2" Apply adhesive on the coil, so that the turns will never open.

Step 10:- Clean the ends of the coil by a Blade and connect across the terminal marked C - D.

Step 11:- Put a Magnetic Needle inside the coil the needle should be positioned along the coil.

Step 12 :- Switch ON the coil and observe the direction of the needle.

Step 13:- Take 2 pcs of wire from the socket using 2 pin-top.

Step 14:- Immerse the stripped ends of the wire into a glass of saline water with a little gap between

wire ends. Switch ON the circuit and observe the bubbles coming from the water indicating the electrolysis of water.

10. Precautions to be taken:

- A. Avoid loose contact by screwing properly
- B. Accessories should be tested before use
- C. Striping and twisting of stranded wire should be done carefully.

11. Development = The projects of Night Lamp, Cigar Lighter, Door Bell, Motor and Electroplating can be developed with a little modification.

12. Teachers Use = Evaluation of the said project.

Evaluation Based on following factors.

- A. Handling of materials and tools
- B. Performance of various activities
- C. Cooperation and response
- D. Appreciation of finished project
- E. Teachers remarks and grading.

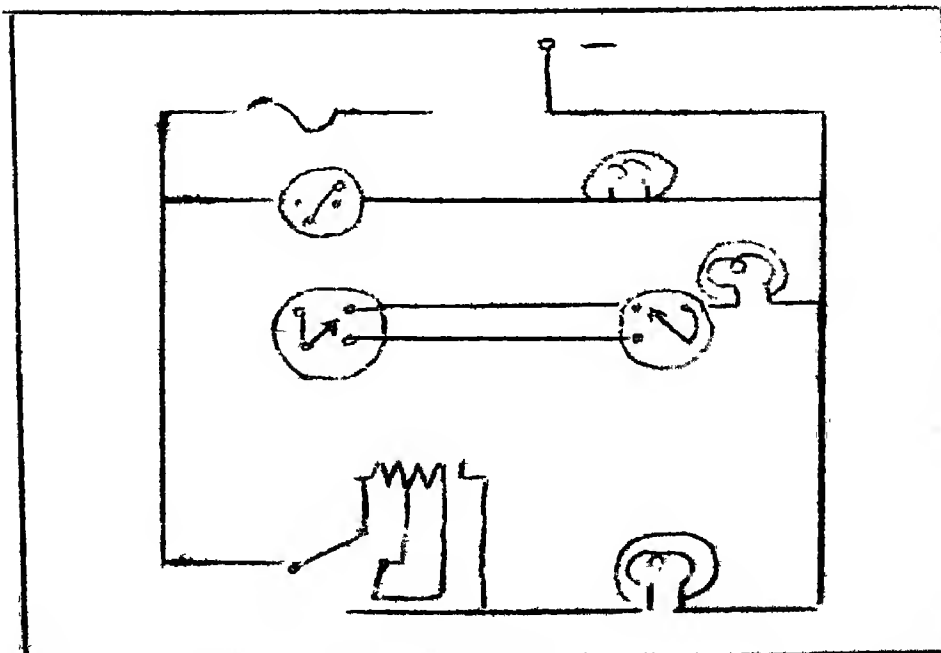


: 43 :  
Sample Curriculum Unit

PLAN - II

Sri B.C. Prasad  
RCE, Bhubaneswar

1. Class :- VII
2. Area :- Shelter (Tech. and Craft)
3. Sub-area :- Circuits, (Connection of various domestic switching circuits)
4. Title of the Project : A teaching aid showing =
  - A. Common lighting circuit
  - B. Stair -case lighting circuit
  - C. Fan Regulator Circuit
5. Related Information =
  - A. Single phase wiring system
  - B. Phase and Neutral (live & dead line)
  - C. Ohm's Law referring to speed control of a fan.
6. Objectives of activities =
  - A. Circuit lay-out and marking of holes.
  - B. Identifying different switches and other accessories.
  - C. Minor trouble shooting and replacement of defective accessories at home.
7. Circuit Diagram:



8. Resources Required:Materials

<u>Name of items</u>	<u>Specification</u>	<u>Quantity</u>
Board	20" x 14"	1
Lamp with holder	Boynet Cap - 60 W	3 set
Kit-Kat (Fuse)	15 A.	1 no.
One-Way switch	5 Amp.	1 no.
2-W. Switches	5 Amp.	2 nos.
Fan Regulator Switch	5-way	1 no.
Regulator Resistor	1 K Ohms	1 no.
PVC wire	3/22 SWG	10 mtrs.
Machine Screws	1/8" x 1"	2 dozns.

Tools

Hand Drill	1/8" Bit	1 no.
Pliers	7" Combination	1 no.
Screw Driver	4" and 6"	1 set
Knife	2"	1 no.
Soldering Iron	25W	1 no.

9. Conducting Activities:

- Step 1 : Grouping and Allotment of jobs to each group
- Step 2 : Mark the holes, Drill the holes and fix the accessories on the Board.
- Step 3 :- Complete the connection of 1-way circuit and connect the Board to Mains, as shown in diagram.
- Step 4 : Put the fuse wire (5 Amp) in the cut-out and switch ON the circuit. The light should glow
- Step 5 : Complete the connections of 2-way circuit and the lamp will glow from two different point of switches independently.
- Step 6 : Complete the connection of Multi-way switch circuit as shown in the diagram.
- Step 7 : Solder the resistor terminals with switch (the first way should be left for OFF)
- Step 8 : Move the multi-way switch/regulator clockwise and observe the intensity of light at various steps.

10. Pre-cautions to be taken:

- A. Avoid joints other than at terminals.
- B. Avoid Dry Soldering
- C. Do not touch any open metallic part.
- D. Keep yourself isolated from the group while working with the circuit.
- E. <sup>Connect</sup> Keep all the switches and cut-out in live line.
- F. Disconnect the Board from the Mains while working with the Board.

11. Development:

Projects of minor repair of stair -case lighting, fuse replacement, fan circuits repairing can be undertaken at home.

For Teachers Use

12. Evaluation:

Teachers'  
Remarks

- A. Handling of Materials and Tools =
- B. Performance in various activities =
- C. Co-operation and response =
- D. Appreciation of finished job =
- E. Grade \_\_\_\_\_

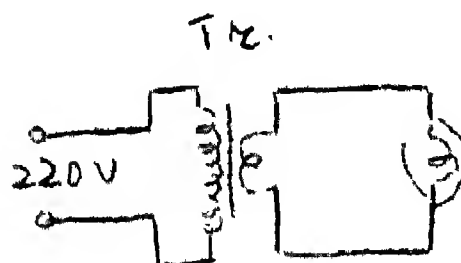
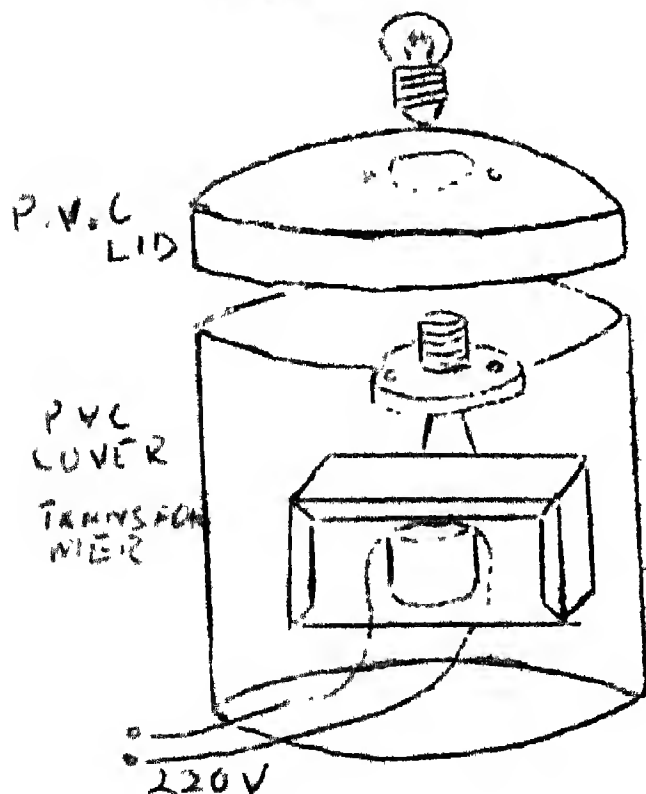
Sample Curriculum Unit

PLAN - III

Sri B.C. Pradhan  
RCE, Bhubaneswar

1. Class :- VIII
2. Area :- Shelter (Tech and Craft)
3. Sub-area :- Electricity and Magnetism (Transformer)
4. Title of the Project :- Night Lamp
5. Related information :- A) Construction and parts of the transformer.  
B) Working principle and function of transformer.  
C) Various applications
6. Objectives of Activities:
  - A) Identification of Terminals
  - B) Making a simple transformer circuit (step-down)
  - C) Soldering, sleeving and finishing

7. Diagram:



8. Resources Required:

Materials

<u>Name of Items</u>	<u>Specification</u>	<u>Quantity</u>
PVC Containor/Box	3" dia x 2" ht	1
Step-down Transformer	220V/6V - .5A	1
S.C Lamp with holder	6V - .3A	1
PVC Sleeve	3/16"	6"
Line cord with Plug Top	2 Amp.	4 ft.
Machine Screw	1/8" x 1"	4 nos.

Tools

Hand drill with bit	1/8" and 3/16"	1 set
Screw Driver (insulated)	4"	1
Electricians Knife	3"	1
Soldering Iron	25W	1

9. Conducting activities:

- Step 1 : Mark the holes of Transformer on the bottom of the containor as shown in dotted line.
- Step 2 : Mark the holes of the Lamp holder on the Lid of the containor as shown in dotted line.
- Step 3 : Drill the holes in the container and its Lid.
- Step 4 : Make hole in the wall of containor with the help of hot soldering iron (by piercing) for line cord entry.
- Step 5 : Make a hole in the centre of the PVC Lid with help of not soldering iron. The size of the hole should be of the Lamp holder, so that the mouth of the holder can enter freely.
- Step 6 : Fix the transformer on the bottom of the container and the Lamp-Holder in the Lid from the innerside.
- Step 7 : Fit the Lamp on the holder from outer side
- Step 8 : Solder the ends of the secondary terminals of the transformer with the terminals of the Lamp holder with hook up wires.
- Step 9 : Insert the open end of the line cord through the hole made in container wall and tie a knot leaving 2" from the end, so that the knot will check from pulling.
- Step 10: Separate the 2 core wires and put the sleeves of 1 1/2" length to cover the soldering.
- Step 11: Solder, line cord ends with primary ends of the transformer.

- Step 12: Cover the joints by sleeve and close the Lid of the container.
- Step 13: Connect the plug-top of the line cord to the Mains. Now the lamp should glow and put the glass candle - holder to cover the Lamp.
- Step 14: Observe the heating and noise effect of the transformer/project for some time.

10. Precautions to be taken:

- A. Avoid short-circuit
- B. Avoid dry soldering
- C. Take care, while cutting the insulation of the line cord, so that no strand will break.

11. Development:

This project can be developed as Power Supply Unit (Battery Eliminator) for Portable Radio Receivers and small Tape Recorder by adding Rectifiers and Filter.

For Teacher's Use

12. Evaluation and Grading

Valedictory address of the Programme Co-ordinator  
ORIENTATION-CUM-TRAINING OF KEY RESOURCE PERSONS  
IN WORK EXPERIENCE IN MLL  
( 10.11.94 to 15.11.94 )

Venue : Imphal

Participants : Elementary Teachers & DIET Staff

With today's Valedictory function, we have come to the end of this 10 days' Orientation-cum-training programme in Work-Experience in MLL. When the programme was originally conceived, it was pre-supposed that Work-Experience must have been an integral part of the school education in Manipur and therefore it was decided to concentrate on skill enrichment of the teachers through Work-Experience in the elementary schools. After interacting with the participants only, it could be known that they needed enrichment in the pedagogic aspect also. Attempts were made to do as much as the time permitted but a lot more needed to be done.

During these 10 days, there have been discussion on the following topics.

1. Concept, need and scope of Work-Experience with special reference to NPE, 1986.
2. Selection of activities from classes I to VIII
3. Methodology of teaching Work-Experience
4. Planning of lesson in Work-Experience
5. Preparation of Doing-Learning Unit
6. Evaluation in Work-Experience
7. Minimum Levels of Learning
8. Functions of Work Experience Teacher

Participants have suggested a list of activities under MLL from classes I to VIII in the six need based areas, during the programme.

Special demonstrations were carried out by some of the participants.

- 1) Sri Mangolgaon Singh, DIET, Imphal demonstrated the preparation of squash from pine apple with the help of participants. 4 bottles have been kept for exhibition. The quality is upto commercial standards.
2. Smt. Keirangbi Devi demonstrated how to prepare a door mat from wooden thread and how to make a doll from waste and rags.
3. Sri L.Tomba, participant from DIET, Imphal gave a demonstration on how to prepare <sup>a paper</sup> fish, fish from plastic tapes and Dalhia and Rose flowers from crepe paper.

All these have been kept as exhibits. During their practical classes, the participants have undertaken and completed the following projects.

<u>Area</u>	<u>Have prepared</u>
Art work and paper work	Greeting Cards of Marble Prints Paper trays Pen stand Charts Thread Prints Spatter Prints Postal Envelop Office envelop
Agriculture	Pot Cultivation Preservation of Amla Plant raising in polythene Seed cutting and planting in polythene bags Flower album Seed album Compost Pit



Wood work	Students Writing Board (Plain)
	Students writing Board (Sun Mic.)
	Desk Calendar
	Pointer
	Name Plates
Electrical	Switch Boards of different types
	Test Lamp
	Night Lamp
	Polarity tester
	Electromagnet with Battery Box
	Compass
	Demonstration Board to show effect of Electricity

Demonstration Board (to display domestic wiring)

I already mentioned during the inauguration that in a skill oriented programme there are many limitations owing to non-availability of infrastructural facilities. Procurement of raw material as per specifications posed problems for us. However, I shall say that our achievements are beyond our expectations. This has been possible because of the co-operation of the authorities of SCERT, Principal DIET and the participants. I thank all of them especially the Director, Dr. R.K.Nimai Singh, the Dy. Director Sri Labanga Singh and his staff for extending their full co-operation to make this programme a success.

I should mention here that the Director, NCERT is giving stress on follow up of the out-come of the prog. Therefore I would request the authorities and participants to utilise this training-cum-orientation programme to the best extent possible.

Lastly I must express my gratitude and thanks to my colleagues Sri S.C. Das, Sri B.C. Brahma, Sri B.K. Dutta and Sri D. Moharana who have come all the way leaving their families at Bhubaneswar and worked so hard to make this programme a success.

SUGGESTED LIST UNDER MLL FOR MANIPUR

FOR CLASS I to II

- i) Observing adults at home and the class fellows in the school with regard to PERSONAL CLEANLINESS.
- ii) Organising cleanliness parades (regarding cleanliness of various parts of the body and clothes)
- iii) Exploring and enlisting , things in class room and home that are likely to be soiled because of dirty hands.
- iv) Collection of locally available flowers, vegetables fruits identify them for different season.
- v) List of common domestic animals and recognition.
- vi) Collection of dry-leaves, weeds, removal of stones, bricks and putting the refuses in the pits.
- vii) Watering the pots, planting young seedlings in pots.
- viii) ~~Preparing:~~ List of watering implements, identify them, draw of their sketch (by free hand).
- ix) Working with clay; ~~and other pliable materials to~~ / make models. (like models of fruits, vegetables, animals and idols etc etc.
- x) Simple paper works:- Putting covers on books and copies.
- xi) Cleaning of furniture and removing dust from furniture and walls.
- xii) Helping in the cleanliness and maintenance of rooms in the home and school including the boundary walls and play fields.
- xiii) Observation of proper use and maintenance of clothes, keeping them neat and clean.
- xiv) Observation of decoration of the surroundings and assisting the elders in such works - celebration of Independence day, Teacher's day, Children's day and Republic day etc. etc. (special occasion)
- xv) Preparation of garlands for decoration and helping the elders in organising exhibition/school festival/ National day etc. etc.
- xvi) Celebration of social events, birth days.
- xvii) Assisting elders in organising exhibitions.
- xviii) Assisting health campaigns and agricultural operations.

FOR CLASS III to V

- i) Cleaning of class rooms and school compound.
- ii) Visit to road safety demonstration grounds (wherever possible), and Health centres.
- iii) Preparing charts, posters on road signs for display in the school and surrounding community.
- iv) Preparation of simple tooth powder and knowing about the ingredients - used for making tooth powder by indigenous materials.
- v) Knowing about the distinction between toilet soap, washing soap and detergent powder.
- vi) Collection of soils, rocks, <sup>identification of</sup> the types of soils by feeling method, identification of dry and wet soil, adding <sup>manure</sup>.
- vii) Lists of common crops of the seasonal/season was also of the locality, collection of seeds, classify them, making album of seeds.
- viii) Identification of some common garden tools - working and uses of the tools.
- ix) Preparation of compost pits and making compost manure.
- x) Interculture Operation (Like mowing and weeding manuring, application of insecticides and pesticides, etc. etc), keeping the garden clean, assisting elders in such works.
- xi) Assisting the elders in catering and distribution of food.
- xii) Helping elders in cooking food.
- xiii) Preparation of Nursery Beds and growing of vegetables in plots and pots.
- xiv) Making simple toys and pictorial composition with paper by folding, tearing, cutting and pasting it.
- xv) Making greeting cards, writing pads (clip-board) and envelop with paper and card board, Making boxes and trays etc. etc.
- xvi) Binding of books and exercise books.
- xvii) Clay - work - such as different models of vegetables, fruits, toys, flower vase, flower pots in clay, colouring them.
- xviii) Repair of simple wooden articles by fixing nails in them.

- xix) Preparation of name plates with wood.
- xx) Fixing of book rack, picture and picture frame on walls.
- xxi) Making simple circuit connections with battery.
- xxii) Washing of clothes, spinning and simple hand weaving or knitting, stitching of simple garments.
- xxiii) Mending of clothes.
- xxiv) Making of table cloth, napkins and tray clothes.
- xxv) Decoration of class room, school's Hall in special occasions.
- xxvi) Doll making
- xxvii) Making of various model made of paper/ bamboos/ plasticine etc.
- xxviii) Arranging Cultural shows and exhibition.
- xxix) Visiting Bank/Post Office.
- xxx) Cleaning the community (school)/neighbourhood.
- xxxi) Digging soak pit, garbage pit and making use of pits.
- xxxii) Planting and care of shade trees in the school compound and along the road sides.
- xxxiii) Running of co-operative stores.

LISTS OF ACTIVITIES FOR CLASS VI to VIII

- i) Keeping the school compound clean, removal of cobweb from the walls of the classroom, cleaning of window panes, removal of the litter and dumping it in the compost pit, making of brooms.
- ii) Spraying kerosene oil on stagnant water.
- iii) White washing of school - scraping of walls, mixing of lime with water, adding other ingredients, application of lime.
- iv) Measuring body temperature, noting pulse rate and heart beats, washing of thermometer.
- v) First aid - Treating of cuts, burns, bites of insects and bruises, giving of artificial respiration by different methods.
- vi) Organising - Health exhibitions concerned with communicable diseases such as Malaria, Small Pox, Typhoid etc. and taking preventive measures in the school and community for avoiding.
- vii) Home Nursing - making bed for a patient, feeding a patient.
- viii) Developing safety precaution lists for classrooms, laboratories, workshops, Road, Kitchen, bedroom and bathroom.
- ix) Kitchen gardening - digging the soil, making and preparing the plots, sowing seeds or transplanting seedlings, watering and caring for plants, uses of fertilizers, insecticides/pesticides, collecting produce, selling the produce.
- x) Storing and preservation of food, preparation of Jam, Jelly, Chutneys etc.etc., processing bottling, packaging and levelling, marketing and then Dehydration of vegetables.
- xi) Demonstration methods of cooking i.e. steaming and frying, preparation of different types of snacks. e.g. bread - rolls - boundas, pakoras, omlette etc. etc.
- xii) Preparing Lunch Packets.
- xiii) Take care of the equipments and tools before use and after use.
- xiv) Assisting in poultry, pig, ery farmings.
- xv) Planting Road side trees and care.

- xvi) Simple wood work - Making and repairing of articles, reassembly of joints, replacement of broken parts, nailing making of trys.
- xvii) Polishing and painting - repairing surface damage, smoothening the surface, preparation of different types of polishes, polishing.
- xviii) Making and repairing of Electric gadgets, repairing of electric iron, heaters and stoves, replacement of fuse and cut outs, fixing wire, bulb holder, plug and switch.
- xix) Preparation of Night Lamp.
- xx) Spining weaving, knitting, Mending of clothes.
- xxi) Making of garments and stitching articles - baby frock or a baby suit.  
- washing of different types of clothes - silk clothes, wool clothes etc. etc.
- xxii) Organising cultural functions and exhibitions in the school.
- xxiii) Making of costumes.
- xxiv) Making and repair of Musical instruments.
- xxv) Giving setting to the auditorium.
- xxvi) Providing lighting arrangement.
- xxvii) Giving necessary setting, assembly and prayers.
- xxviii) Cleanliness and maintenance of the classroom, school building and its properties.
- xxix) Arranging drinking water and taking care of its hygienic aspects.
- xxx) Promoting health habits in younger children.
- xxxi) Maintenance and cleanliness of the neighbourhood by making survey of needs of the community in matters of sanitation, garbage disposal, drainage, pond, well and planning and executing programmes for solving problems faced in these areas.
- xxxii) Organising field trips.

ORIENTATION-CUM-TRAINING OF KEY RESOURCE PERSONS  
IN WORK-EXPERIENCE IN MLL  
 (10.11.94 - 19.11.94)

V e n u e: DIET Hall, SCERT, Imphal  
 Prog. Coordinator : Er. P.K. Mohanty.

PROGRAMME

10.11.94	-	10 A.M. to 11 A.M.	-	Registration
		11 A.M. to 11.30 A.M.	-	Tea Break
		11.30 AM to 1 P.M.	-	Inauguration
			-	Welcome and present of purpose of the programme by Prog.Coordinator
			-	Inaugural address by Director, SCERT, Imphal.
			-	Vote of thanks
		1 P.M. to 2.00 P.M	-	Lunch Break
		2 P.M. to 2.30 P.M	-	Grouping of participants (participants are placed into 4 groups A,B,C,D 7 participants in each group)
		2.30 P.M to 4.30PM	-	Skill practice in different areas; Gr A - Paper work, Group B - Agriculture, Gr 4 C - Wood Work and D - Electricity
11.11.94	-	9.30 AM to 10.30AM	-	Lecture & group discussion Topic: Objective of ...
		10.30 AM to 10.45 AM-	-	Tea break
		10.45 AM to 1 P.M	-	Skill practice by different groups in previous areas
		1.00 PM to 2.00 P.M	-	Lunch Break
		2 P.M. to 4.30 P.M	-	Skill practice as above
		(3.30 P.M.:Tea break; to 3.45PM	-	
12.11.94	-	9.30 AM to 10.30 AM	-	Lecture and discussion Topic--Areas of W.E. Stages of Teaching-Learning
		10.30 AM to 10.45AM	-	Tea break
		10.45 AM to 1 P.M.	-	Skill practice as follows D group - Paper Work A group - Agriculture B group - Wood work C group - Electricity
		1 P.M. to 2 P.M.	-	Lunch break
		2 P.M. to 4.30 P.M	-	Skill practice (same as above)
		3.30 PM to 3.45 PM (Tea break)	-	
13.11.94	-	---	-	Home assignment

14.11.94	-	9.30 AM to 10.30 AM	-	Lecture On MLL & demonstration of lime apple squish
		10.30 AM to 10.45 AM	-	Tea break
		10.45 AM to 1.00 PM	-	Skill practice as on 12.11.94
		1.00 PM to 2.00 PM	-	Lunch break
		2.00 PM to 4.30 PM	-	Skill practice
		3.30 PM to 3.45 PM	-	( Tea Break )
15.11.94	-	9.30 AM to 10.30 AM	-	Lecture-cum-discussion Topic: Components of Lesson Plan
		10.30 AM to 10.45 AM	-	Tea break
		10.45 AM to 1 P.M.	-	Skill practice Group C - Paper Work Group D - Agriculture Group A - Wood Work Group B - Electricity
		1 P.M. to 2 P.M.	-	Lunch
		2 P.M. to 4.30 PM	-	Skill practice as per above
		3.30 PM to 3.45 PM	-	( Tea break )
16.11.94	-	9.30 AM to 10.30 AM	-	Lecture-cum-discussion Topic: 1) Evaluation and Work-Experience 2) MLL
		10.30 AM to 10.45 AM	-	Tea break
		10.45 AM to 1 P.M.	-	Skill practice
		1 P.M. to 2 P.M.	-	Lunch break
		2.00 PM to 4.30 P.M.	-	Skill practice as on 15.11.94
		3.30 PM to 3.45 PM	-	( Tea break )
17.11.94	-	9.30 AM to 10.30 AM	-	Finalisation of M.L. activities under MLL
		10.30 AM to 10.45 AM	-	Tea break
		10.45 AM to 1 P.M.	-	Skill practice Group B - Paper Work Group C - Agriculture Group D - Wood Work Group A - Electricity
		1 P.M. to 2 P.M.	-	Lunch
		2 P.M. to 4.30 PM	-	Skill practice
		3.30 PM to 3.45 PM	-	(Tea break)
18.11.94	-	9.30 AM to 10.30 AM	-	Lecture-cum-discussion Topic: Tasks of a Work-experience teacher
		10.30 AM to 10.45 AM	-	Tea break
		10.45 AM to 1 P.M.	-	Skill practice
		1 P.M. to 2 P.M.	-	Lunch
		2.30 PM to 4.30 PM	-	Skill practice
		3.30 PM to 3.45 PM	-	(Tea break)
19.11.94	-	9.30 AM to 1 P.M.	-	Exhibition of M.L. products. Validictory function, address of Director, SOEHS
		1.00 PM to 2.00 PM	-	Closing ceremony
		2.00 PM to 4.30 PM	-	Lunch break Disbursement of TA & DA and certificates.



List of Resource Persons

1. Sri S.C. Das,  
Lecturer,  
Agriculture Department,  
Regional College of Education,  
Bhubaneswar - 751 007.
2. Sri D. Mcharana,  
Work Experience Teacher,  
Technology Department,  
Regional College of Education,  
Bhubaneswar - 751 007.
3. Sri B.C. Brahma,  
Work Experience Teacher,  
Technology Department,  
Regional College of Education,  
Bhubaneswar - 751 007.
4. Sri B.K. Dutta,  
Work Experience Teacher,  
Technology Department,  
Regional College of Education,  
Bhubaneswar - 751 007.

List of participants

1. T. Bikom Das,  
Asst. Teacher,  
Wangjing Public School,  
Imphal (Manipur).
2. L. Bormani Singh,  
Asst. Teacher  
Budhimajuri Jr.High School,  
Imphal (Manipur).
3. M. Maimu Singh,  
Asst. Teacher  
Wangjing Secondary School,  
Imphal (Manipur).

4. B. Binari Sharma,  
Asst. Teacher,  
Mahatma Gandhi Jr. High School  
Imphal (Manipur).
5. Md. Ataullah,  
Asst. Teacher,  
M.I. Ithana Leirensana Jr.  
High School,  
Imphal (Manipur).
6. K. Idur Singh,  
Asst. Teacher,  
Maklong Jr. High School,  
Imphal (Manipur).
7. Th. Rojen Singh,  
DIET, Churachandpur,  
Imphal (Manipur).
8. Khoudam Doren Singh,  
DIET, Kakching,  
Imphal (Manipur).
9. K. Iswar Kumar Singh,  
DIET, Churachandpur,  
Imphal (Manipur).
10. W. Bulhi Singh,  
Asst. Teacher,  
Bishnupur Awang Public School  
Imphal (Manipur).
11. Y. Krishna Kumari Devi,  
Craft Instructor,  
DIET  
Imphal (Manipur).
12. L. Tomba Singh,  
D.I.E.T.,  
Imphal (Manipur).
13. Th. Ibamcha Singh,  
Asst. Teacher  
Nacrem Jr. High School,  
Imphal (Manipur).
14. L. Behari Singh,  
Asst. Teacher,  
Tantha High School,  
Imphal (Manipur).
15. K. Prasanna Kumar,  
Asst. Teacher,  
City Jr. High School,  
Imphal (Manipur).
16. L. Shakhi Devi,  
Asst. Teacher,  
Kshetri Leikora  
School,  
Imphal (Manipur).
17. Indramani Teng,  
Asst. Teacher  
Nacrem Jr. High School,  
Imphal (Manipur).
18. O. Ibobi Singh,  
Asst. Teacher,  
Thangtek Jr. High  
School,  
Imphal (Manipur).
19. O. Premila Devi,  
Asst. Teacher,  
Moirang Konjong, Jr.  
High School,  
Imphal (Manipur).
20. M. Leirengba Devi,  
DIET, Kakching,  
Imphal (Manipur).
21. L. Ibetombi Devi,  
Asst. Teacher  
Moirangkhom Jr. High  
School,  
Imphal (Manipur).
22. Ph. Subha Devi,  
Asst. Teacher,  
Khwai Jr. High School,  
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23. N. Mangalgao Singh,  
Asst. Teacher,  
DIET, Imphal.
24. L. Biramangal Devi,  
Asst. Teacher  
Lairengam Jr. High  
School,  
Imphal (Manipur).
25. H. Tikendrajit Singh,  
Asst. Teacher,  
Kumbi Jr. High School,  
Imphal (Manipur).
26. Ash Danita Devi,  
Lecturer  
DIET, Imphal.
27. N. Megha Singh,  
Asst. Teacher,  
Haretibi Jr. High  
School,  
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